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Optical thin film having less cumulative effect - used for optical systems using high optical strength ultraviolet ray laser beams

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Number of Countries: 001 Number of Patents: 001

Patent Family:

Patent No Kind Date Applicat No Kind Date Main IPC

JP 63142301 A 19880614 JP 86289696 A 19861204

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Priority Applications (No Type Date): JP 86289696 A 19861204

Patent Details:

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Application Patent

JP 63142301 A 5

Abstract (Basic): JP 63142301 A

A multilayer or single layer optical thin film accepts extreme ultraviolet laser beams having the following optical strength: (a) At least 1.5 J/cm2 for a fluorite substrate supporting the film. (b) At least 0.8 J/cm2 for a quartz substrate. The thin film is composed of a fluoride dielectric substance or an oxide dielectric substance for the fluorite substrate or the quartz substrate respectively.

USE/ADVANTAGE - The optical thin film is applied to an antireflection film, interference filter, or interference mirror. The film is used for an optical system employing high optical strength extreme ultraviolet ray laser beams. The film has less cumulative effect. A difference is observed between the max. laser beam value (causes damge to the film) when the number of pulses (pulse light) is low and that when the number of pulses is high. The max. laser beam value when the number of pulses is high tends to decrease. This tendency is called the cumulative effect.

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Title Terms: OPTICAL; THIN; FILM; LESS; CUMULATIVE; EFFECT; OPTICAL; SYSTEM; HIGH; OPTICAL; STRENGTH; ULTRAVIOLET; RAY; LASER; BEAM

Derwent Class: L01; P81; V08

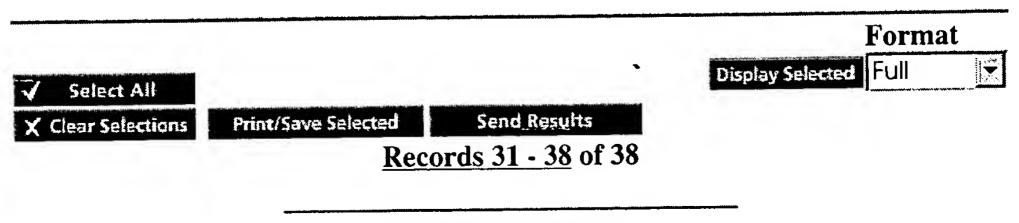
International Patent Class (Additional): G02B-001/10; G02B-005/28

File Segment: CPI; EPI; EngPI

Manual Codes (CPI/A-N): L01-L05; L02-G10; L03-G

Manual Codes (EPI/S-X): V08-A09

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